

Today's Topics:

CCD
cellular phones and their rules
Cellular Telephone Rules.
Early Radio History
How to begin.. (2 msgs)
MOSLEY TA32 jr
QST cutbacks
UoSat 1 / Oscar 9

Date: 11 Oct 89 21:15:11 GMT

From: gem.mps.ohio-state.edu!ginosko!shadooby!mailrus!jarvis.csri.toronto.edu!
utgpu!watmath!maytag!watdcsu!magore@tut.cis.ohio-state.edu (Mike Gore, Institute
Computer Research - ICR)
Subject: CCD

In article <8910110710.AA27081@ucbvax.Berkeley.EDU>

MARKIEWI@CSHLAB.BITNET writes:

>Does anyone know where I can buy CCD's for a project I am working
>on. Any info would be appreciated.

Contact TI. They have several CCD's. I just recently ordered
from a TI supplier a TCS241 [754*488 area CCD with support chips.] It was
\$401 US. They also have a TC211 which is a 192*165 low cost CCD that
needs an external shutter but cost less then \$50 US. Try asking for their
new Optoelectronic Data Book. TI has an Optoelectronic Branch
in Dallas [1-214-997-3382] - they could likely give you a number
for a TI rep near your area.

Good Luck!,

[I do not work for TI]

Mike Gore, Technical Support, Institute for Computer Research
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Date: 12 Oct 89 03:06:28 GMT

From: att!cbnewsm!wrc@ucbvax.Berkeley.EDU (william.r.clegg)
Subject: cellular phones and their rules

> I believe that the rules for cellular phones state that the
> maximum permissible output is 3 Watts ERP, where ERP = output power x
> antenna gain.

The power limit for the mobiles is nominally 3 watts at the antenna connector.
With the typical 3db gain antennas, this puts the ERP at about 6 watts ERP.

Bill
KD2XK

Date: 12 Oct 89 02:35:30 GMT
From: att!cbnewsm!wrc@ucbvax.Berkeley.EDU (william.r.clegg)
Subject: Cellular Telephone Rules.

In article <30500222@ux1.cso.uiuc.edu>, phil@ux1.cso.uiuc.edu writes:

>
> > We were told once upon a time that high power and high gain antennas were
> > undesirable in the cellular telephone context because of the risk of
> > extending range too far beyond the limits of one's own "cell". I take it then
> > that this is not borne out by experience?

>
> In metropolitan areas where several adjacent cells exist, it might be a
> problem. In isolated areas where one cell has not actual adjacent cells,
> I don't see physical problems developing with it as quickly. Maybe you
> could say that by adding gain, you might get into an adjacent cell that
> you don't want to get into. I don't know how the cellular systems hands
> off the call as you move from one cell to another, but with added gain
> you might find these things happening much more often.
>

A higher gain antenna will not be much of a benefit for cellular
phones since the entire system is designed with automatic power control of
the mobiles and will adjust the power levels to maintain specific limits.
It is also unlikely that you would be able to get into channels in adjacent
cells unless you are equally distant from the two cell sites in which case
you would be handed off between the two until you capture one of them.
There is some hysteresis during these handoffs which is on the order of
4db. When a cell phone is first turned on,
it scans through all of the control channels and locks on to the strongest
one which, hopefully, is one that is in the same cell as you.
When you want to place a call or you receive a call, your set is still on
the control channel passing data which include power level adjustment and
voice channel assignment. Your voice channel assignment will be a channel
in the same cell site as you.

All during your conversation there is an overhead data stream that will

automatically adjust your power depending on how close to the cell site you are. The range of adjustment is 28 dB in 7 steps. This means that your power will range from a maximum of 3 watts to a minimum of about 5 milliwatts. So, if the cell site determines that your signal is too strong it will cut you power back or if it is too weak it will step you up. This dynamic adjustment of power by the cell site would defeat the purpose of using a higher gain antenna. The best improvement that you could make is to install the antenna properly. Any departure from a well installed antenna with a good ground plane (center of the roof) will degrade the performance.

Bill

Date: Wed, 11 Oct 89 22:22:49 -0700
From: Doug Faunt N6TQS 415-688-8269 <faunt@cisco.com>
Subject: Early Radio History

So, where are interesting radio museums?
When I was in Leningrad in June, I located a Communications Museum, but when I got there was told that they were renovating.
The science museum (I forget the name) in London is interesting (I went in as default during a tube strike, and didn't want to come out), but it's not all radio. There is a ham station there, but it wasn't run that day.

Date: 11 Oct 89 20:42:11 GMT
From: hpda!hpcupt1!bmp@ucbvax.Berkeley.EDU (Brian M. Perkin)
Subject: How to begin..

The Gordon West courses are also available in most radio shack stores under a radio shack label.

Brian Perkin
N6RSW

Date: 11 Oct 89 16:25:18 GMT
From: hpda!hpcupt1!hprnd!hprnokg!barry@ucbvax.Berkeley.EDU (Barry Fowler)
Subject: How to begin..

adoane@pro-harvest.cts.COM (Andrew Doane) writes:

>I have been a computer/modem enthusiast for 7 years. HAM Radio has always

>interested me slightly. However, until a friend of mine showed me is HT, I
>have never tried to gain a license.

>I would now like to become involved in HAM Radio. The problem is I have no
>idea where to start. I know I must learn basic radio theory and code, but
>don't know where to gain the matierals to do this nor do I know where I can
>take the test.

>Is there a package that I can purchahse to teach myself everything I need to
>know for the basic lic? In addition, is there a program to teach code (I have
>an Apple IIgs)

>Any help would be welcome.

A good package for getting started in Amateur Radio is "Tune in the World
with Amateur Radio" from the American Radio Relay League.

Their address is 225 Main St, Newington, Ct 06111
It costs \$15.00 (book plus code cassettes order #0380) or
\$12.00 for book only (order #0399).

Get a copy of QST magazine at your local book store and there are lots
of products that are designed to get you started at a minimal cost.

The Gordon West Courses are also quite good (advertised in QST and other
magazines such as 73's Magazine and CQ).

Barry
WB6JZL

Date: 11 Oct 89 17:09:04 GMT
From: littlei!foobar!jim@uunet.uu.net (Jim Garver)
Subject: MOSLEY TA32 jr

In article <7120086@hpcupt1.HP.COM> holly@hpcupt1.HP.COM (Jim Hollenback) writes:
>I am thinking of putting up a Mosley TA-32 jr. antenna. I was wondering
>if anyone on the net has experience with this antenna.

I use one of these antennas and I turn it with an older Radium Shack
TV antenna rotator. Poor thing, it doesn't mind turning the 16 lb. antenna
once it gets going, but the moment from the 26 ft. elements gives it a
pain to start and stop. I took the rotator apart and greased the thrust and
worm gears before putting it to this task.

The Mosley TA-32 Jr. antenna is compact and effective, unless you want some

front-to-back ratio, which it just doesn't have. Sharp on the sides, tho. Its supposed to have 5.5 dbd of gain, which is about right for a 2 element reflector yagi with a 6 ft. boom.

I find my antenna works good on 10 and 15 meters, only fair on 20. I probably should clean the traps. Mosley has a paper available about repair and maintainance of their antennas. They also have some gray anti-oxide goop for about \$5 per puny bag. You can buy a whole can full at the hardware store for the same price. No-Alox? something like that. Smear it around where the elements slide together.

This antenna is not grounded on one element in case you get lots of T-storms in your area. We don't. I use a choke balun to prevent feedline radiation. About 8 or 10 turns of the coax in a 6 to 8 inch diameter is supposed to work. Wind it around a big ferrite rod if you think you need more choke. Its gotta be better than that butterfly beam.

--
_ \ _ \ Jim Garver _ \ _ \ <tektronix!psueea | uunet!littlei>!foobar!jim
 \ \ WA7LDV & N3170N _ \ _ \ () _ \ _ \ jim@foobar<.hf.intel.com|.uucp>
Development Tools Operation, Intel Corp. Hillsboro, Oregon 503-696-2094

Date: 12 Oct 89 03:32:07 GMT
From: swrinde!cs.utexas.edu!ut-emx!oo7@ucsd.edu (Your Tax Dollars At Work)
Subject: QST cutbacks

phil@ux1.cso.uiuc.edu suggests:

>So if QST had to cutback 25%, then why not cut 25% out of each area?
>Since they did NOT do that, it's obvious they don't want to represent
>all amateurs.

Right - they should take those propagation charts and leave out a quarter of them (MUFs from the West Coast to Japan, I wouldn't miss that at all), they should list QSL managers only for stations whose call letters start with A-S, leave out the rest, list upcoming contests for the first three weeks of each month only - and of course when they print pictures of the ARRL board they should trim the photo so that we don't see anything below the knees.

Derek Wills (AA5BT, G3NMX)
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Austin TX 78712. (512-471-1392)
oo7@astro.as.utexas.edu

"I'll call you from Spratly Island", said Tom, expeditiously.

Date: Thu, 12 Oct 89 00:29:41 EDT
From: LANG@UNB.CA
Subject: UoSat 1 / Oscar 9

For those that may be interested in updating the ephemeris for UoSat 1 / Oscar 9: I recorded the following Doppler-shifted frequencies of a pass on 12 October (UT) from about 01:19 to 01:25 UT. Coordinates of my QTH: 45-54-42 N, 66-44-56 W. The received frequencies were determined by reading the receiver frequency dial after centering the tuning meter. The times are accurate to about 1 second and the frequencies to about 0.1 to 0.2 kHz.

UTC	Freq. (MHz)
1:19:58	145.8288
1:20:14	145.8287
1:20:32	145.8286
1:20:45	145.8285
1:21:01	145.8283
1:21:14	145.8281
1:21:24	145.8280
1:21:37	145.8275
1:21:44	145.8273
1:21:52	145.8271
1:22:00	145.8268
1:22:08	145.8265
1:22:16	145.8261
1:22:23	145.8257
1:22:30	145.8253
1:22:37	145.8250
1:22:45	145.8246
1:22:53	145.8243
1:23:01	145.8238
1:23:10	145.8236
1:23:18	145.8232
1:23:28	145.8230
1:23:39	145.8228
1:23:48	145.8226
1:23:57	145.8224
1:24:12	145.8224
1:24:23	145.8223
1:24:35	145.8222
1:24:46	145.8221
1:24:58	145.8220

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